

DO NOT WRITE ON THIS PAPER. (MUST BE BLANK FOR USE WHEN WRITING TESTS.
You may write on your resource pages.)

Area of 2D objects: in units²

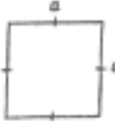

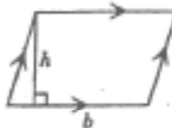
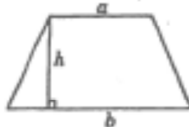
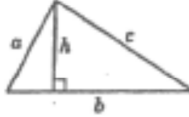

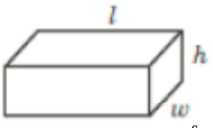
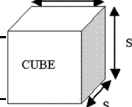
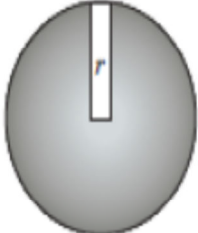
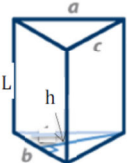
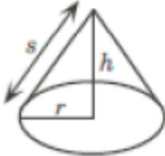
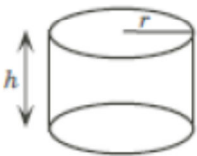
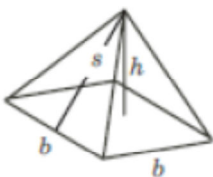
Name of Formula	Diagram	Formula
area of a square		$A = a^2$
area of a rectangle		$A = lw$
area of a parallelogram		$A = bh$
area of a trapezoid	 $A = \frac{(a+b)h}{2}$	$A = \frac{1}{2}(a+b)h$
area of a triangle	 $A = \frac{bh}{2}$	$A = \frac{1}{2}bh$
area of a circle		$A = \pi r^2$

Figure	Diagram	Surface Area (in square units)	Volume (in cubic units)
Rectangular Prism		$SA = 2wh + 2lw + 2lh$ sides top/ bottom front/ back	$V = lwh$
cube		$SA = 6s^2$	$V = s^3$
sphere		$SA = 4\pi r^2$	$V = \frac{4}{3}\pi r^3$

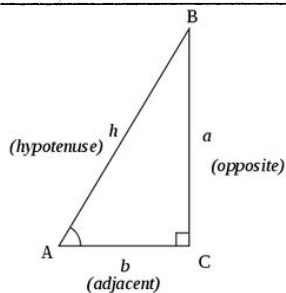
Triangular Prism		$SA = 2\left(\frac{bh}{2}\right) + aL + bL + cL$ <p style="text-align: center;">bases sides (isoc. Δ - 2 sides same area)</p>	$V = \left(\frac{bh}{2}\right)L$
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cone		$SA = \pi rs + \pi r^2$ <p style="text-align: center;">(slanted side only)</p>	$V = \frac{1}{3}\pi r^2 h$
cylinder		$SA = 2\pi rh + 2\pi r^2$ <p style="text-align: center;">side bases</p>	$V = \pi r^2 h$
square base pyramid		$SA = b^2 + 2sb$ <p style="text-align: center;">base sides</p> <p>(s - slant height h - vertical height from apex to base of pyramid)</p>	$V = \frac{1}{3}b^2 h$

Trigonometry

for right triangles only

1 km = 1000 m 1 kg = 1000 g m = 100 cm
1 cm = 10 mm 1 g = 1000 mg 1 l = 1000 ml

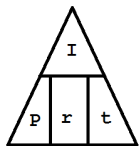


Pythagorean Theorem: $a^2 + b^2 = h^2$ (right triangles only)

Trigonometric Ratios:

$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}} \quad \cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}} \quad \tan \theta = \frac{\text{opposite}}{\text{adjacent}}$$

Simple Interest $I = PRT$



I = interest on principal or loan

P = principal (amount borrowed or invested)

R = yearly interest rate (decimal form)

T = time of loan or investment in years

n = number of interested periods per year

A = final amount (principal + interest)

Compound Interest

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

Capacity: $1 \text{ cm}^3 = 1 \text{ ml}$

$1000 \text{ cm}^3 = 1 \text{ litre}; \quad 1 \text{ m}^3 = 1 \text{ kilolitre}$

Slope of a Line:

$$m = \frac{\text{rise}}{\text{run}}$$

or

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

